Message

From: Fairbanks, Brianna [Fairbanks.Brianna@epa.gov]
Sent: 8/14/2018 10:53:09 PM
To: LEE, LILY [LEE.LILY@EPA.GOV]
CC: Chesnutt, John [Chesnutt.John@epa.gov]
Subject: RE: Revised CSM comment, incorporating Karla's edits and my own

Looks good.

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From: LEE, LILY
Sent: Tuesday, August 14, 2018 3:51 PM
To: Fairbanks, Brianna <Fairbanks.Brianna@epa.gov>
Cc: Chesnutt, John <Chesnutt.John@epa.gov>
Subject: Revised CSM comment, incorporating Karla's edits and my own

1. **Executive Summary; Section 2, Conceptual Site Model; and other sections:** The June 2018 draft *Parcel G Removal Site Evaluation Work Plan* ("Work Plan") acknowledges many aspects of the 2008 Conceptual Site Model (CSM)[1] for storm drain/sewer lines that is cited in the Radiological Removal Action Completion Report (RACR) the Navy produced for Parcel G and other parcels. This 2008 CSM states that contamination could have come from any leaks in storm drain/sewer lines, which could have been a result of many factors that could have occurred at any locations along the lines. (See General Comment # 21 in the U.S. Environmental Protection Agency [EPA] December 2017 comments on the radiological data evaluation for Parcels B and G).[2]

The EPA, State of California Department of Toxic Substances Control (DTSC), and the California Department of Public Health (CDPH) found that the original test results from Tetra Tech EC Inc. are unreliable. Therefore, we are relying on the original 2008 CSM that states that "The potential for materials to migrate from piping/ and manholes into the surrounding soils is significant." The Executive Summary and Section 2, Table 2-1, "Uncertainties" section lists factors that could result in "Lower potential for radiological contamination than originally described in historical CSMs." While some of these factors could theoretically affect the extent of contamination potentially left behind by Tetra Tech EC Inc., until new reliable testing results are available, the 2008 CSM remains relevant. This CSM was the basis for the EPA March 2018 comments on the Navy's February 2018 draft Work Plan for retesting any parcels.

In addition, the Executive Summary and Table 2-1 also refer to anthropogenic fallout as a potential source for Cesium 137 (Cs-137). Previous radiological work at the Hunters Point Naval Shipyard (HPNS) did not apply a reference background value for Cs-137 except in Parcel E-2.[3] While the EPA has no objection to collecting new reference background data for Cs-137, please recall that EPA previously submitted this comment to the Navy about Cs-137 contamination due to Navy activity at Parcel G: "the Navy has found radiological contamination in portions of Parcel G, such as in the southeastern corner (associated with the buildings and the "peanut spill") and in the sewers along Cochrane Street due to previous testing during the Phase I through Phase V Radiological investigations/cleanups. The

[1] *Navy Memorandum for the Record: Conceptual Site Model for the Removal of the Sanitary and Storm Sewers at Hunters Point Shipyard*, December 17, 2008
[2] EPA Review of Draft *Radiological Data Evaluation Findings Report for Parcels B and G Soil, Former Hunters Point Naval Shipyard, San Francisco, California, Comments Dated December 2017.*
[3] ERRG, 2011.

2004 HRA [Historical Radiological Assessment] indicates that Cs-137 was found at high concentrations in sediment from a manhole along Cochrane Street."[4] The HRA documents that the Navy used Cs-137, resulting in liquid waste that resulted in releases in Building 364 in piping, sinks, and the "peanut spill" behind the building. The HRA also documents in Table 5-1 that the Navy had 5 radioactive licenses with the Atomic Energy Commission for Cs-137, one for a quantity of 3,000 Curies and a separate quantity of 20 Curies of Cs-137. Two licenses indicate that Cs-137 was in sources. In some cases, the Navy made their own sources with Cs-137.

Please add to the Executing Summary text that Parcel G has contained Cs-137 contamination due to the Navy's activities. In Table 2-1, "Potential Source Areas" Section, please revise the text to indicate the sources related to Cs-137.

As a result of the above history, until receiving any evidence to the contrary, the underlying assumption should be that new comprehensive testing is necessary and that Cs-137 found in new testing could be due to Navy contamination. The regulators are open to evidence for an alternative CSM, such as new reliable data about the extent of contamination found after excavating the trench units (TU's) most likely to have contamination. Contamination is defined as radionuclide concentrations above the RGs in the 2009 Parcel G Record of Decision, excluding Naturally Occurring Radiological Material (NORM) or anthropogenic background. Excavation and testing of the soil survey units with the greatest likelihood of contamination is an important step toward testing the validity of the original CSM. Please ensure future versions of the Work Plan the updated Master Sampling and Analysis Plan (SAP) address EPA's assumptions about the CSM.

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[4] EPA Review of Draft *Radiological Data Evaluation Findings Report for Parcels B and G Soil, Former Hunters Point Naval Shipyard, San Francisco, California, Comments Dated December 2017.*